

WHAT IS CLAIMED IS:

1. A life safety alarm, comprising:
an alarm housing that houses a system to detect a life threatening condition and alarm electronics; and
a battery carrier configured to carry at least one battery, the battery carrier is pivotally connected to the alarm housing for pivoting movement relative to the alarm housing between a closed position and an open position.
2. The life safety alarm of claim 1, wherein the detection system comprises a smoke detection system.
3. The life safety alarm of claim 1, comprising a double acting latch mechanism connecting the battery carrier to the alarm housing, the latch mechanism configured to control pivoting movement of the battery carrier between the closed and open positions.
4. The life safety alarm of claim 3, wherein the double acting latch mechanism comprises at least one heart shaped cam groove, and a cam follower engaged with the cam groove.
5. The life safety alarm of claim 4, wherein the heart shaped cam groove is defined on the battery carrier and the cam follower is attached to the alarm housing.
6. The life safety alarm of claim 3, comprising a spring engaged with the battery carrier that biases the battery carrier toward the open position.
7. The life safety alarm of claim 1, further comprising structure connected to the alarm housing that is configured to prevent closure of the battery carrier from the open position if a battery is incorrectly installed in the battery carrier.

8. The life safety alarm of claim 1, further comprising a lockout mechanism that is configured to prevent closure of the battery carrier, when the battery carrier is at the open position, without a battery installed in the battery carrier.

9. The life safety alarm of claim 1, further comprising a tamper resist mechanism that is configured to prevent the battery carrier from being opened when the battery carrier is at the closed position.

10. A life safety alarm, comprising:
an alarm housing that houses a system to detect a life threatening condition and alarm electronics; and
a battery carrier that is mounted adjacent on the alarm housing so that it is accessible from the bottom of the alarm housing, the battery being mounted for movement between a closed position and an open position.

11. The life safety alarm of claim 10, wherein the detection system comprises a smoke detection system.

12. The life safety alarm of claim 10, further comprising a double acting latch mechanism connecting the battery carrier to the alarm housing, the latch mechanism configured to control movement of the battery carrier between the closed and open positions.

13. The life safety alarm of claim 12, wherein the battery carrier is pivotally connected to the alarm housing for pivoting movement relative to the alarm housing between the closed position and the open position.

14. The life safety alarm of claim 12, wherein the double acting latch

mechanism comprises at least one heart shaped cam groove, and a cam follower engaged with the cam groove.

15. The life safety alarm of claim 14, wherein the heart shaped cam groove is defined on the battery carrier and the cam follower is attached to the alarm housing.

16. The life safety alarm of claim 12, comprising a spring engaged with the battery carrier that biases the battery carrier toward the open position.

17. The life safety alarm of claim 10, further comprising structure connected to the alarm housing that is configured to prevent closure of the battery carrier from the open position if a battery is incorrectly installed in the battery carrier.

18. The life safety alarm of claim 10, further comprising a lockout mechanism that is configured to prevent closure of the battery carrier, when the battery carrier is at the open position, without a battery installed in the battery carrier.

19. The life safety alarm of claim 10, further comprising a tamper resist mechanism that is configured to prevent the battery carrier from being opened when the battery carrier is at the closed position.

20. A life safety alarm, comprising:
an alarm housing that houses a system to detect a life threatening condition and alarm electronics; and
a battery carrier configured to carry at least one battery, the battery carrier is connected to the alarm housing by a push-to-open and push-to-close mechanism, and where the battery carrier is connected to the alarm housing so as to moveable relative to the alarm housing between a closed position and an open position.

21. The life safety alarm of claim 20, wherein the detection system comprises a smoke detection system.

22. The life safety alarm of claim 20, wherein the push-to-open and push-to-close mechanism comprises a double acting latch mechanism connecting the battery carrier to the alarm housing.

23. The life safety alarm of claim 22, wherein the double acting latch mechanism comprises at least one heart shaped cam groove, and a cam follower engaged with the cam groove.

24. The life safety alarm of claim 23, wherein the heart shaped cam groove is defined on the battery carrier and the cam follower is attached to the alarm housing.

25. The life safety alarm of claim 20, comprising a spring engaged with the battery carrier that biases the battery carrier toward the open position.

26. The life safety alarm of claim 20, further comprising structure connected to the alarm housing that is configured to prevent closure of the battery carrier from the open position if a battery is incorrectly installed in the battery carrier.

27. The life safety alarm of claim 20, further comprising a lockout mechanism that is configured to prevent closure of the battery carrier, when the battery carrier is at the open position, without a battery installed in the battery carrier.

28. The life safety alarm of claim 20, further comprising a tamper resist mechanism that is configured to prevent the battery carrier from being opened when the battery carrier is at the closed position.

29. An electronic device, comprising:

a housing that houses components necessary for the operation of the electronic device; a battery carrier configured to carry at least one battery, the battery carrier is connected to the housing for movement relative to the housing between a closed position and an open position; and

a latch mechanism connecting the battery carrier to the housing, the latch mechanism includes at least one heart-shaped cam groove and at least one cam follower engaged in the cam groove to control the movements of the battery carrier between the open and closed positions, and to retain the battery carrier at the closed position.

30. The electronic device of claim 29, wherein the electronic device is a life safety alarm, and the components housed in the housing comprise a system to detect a life threatening condition and alarm electronics.

31. The electronic device of claim 30, wherein the detection system comprises a smoke detection system.

32. The electronic device of claim 29, wherein the heart shaped cam groove is defined on the battery carrier and the cam follower is attached to the housing.

33. The electronic device of claim 29, comprising a spring engaged with the battery carrier that biases the battery carrier toward the open position.

34. The electronic device of claim 29, wherein the battery carrier is pivotally connected to the housing for pivoting movement relative to the housing between the closed position and the open position.

35. The electronic device of claim 29, further comprising structure connected to the housing that is configured to prevent closure of the battery carrier from the open

position if a battery is incorrectly installed in the battery carrier.

36. The electronic device of claim 29, further comprising a lockout mechanism that is configured to prevent closure of the battery carrier, when the battery carrier is at the open position, without a battery installed in the battery carrier.

37. The electronic device of claim 29, further comprising a tamper resist mechanism that is configured to prevent the battery carrier from being opened when the battery carrier is at the closed position.